

Review

Uncovering Prospective Role and Applications of Existing and New Nutraceuticals from Bacterial, Fungal, Algal and Cyanobacterial, and Plant Sources

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Abstract: Nutraceuticals are a category of products more often associated with food but having pharmaceuticals property and characteristics. However, there is still no internationally accepted concept of these food-pharmaceutical properties, and their interpretation can differ from country to country. Nutraceuticals are used as part of dietary supplements in most countries. They can be phytochemicals which are biologically active and have health benefits. These can be supplied as a supplement and/or as a functional food to the customer. For human health and longevity, these materials are likely to play a vital role. Consumption of these items is typical without a therapeutic prescription and/or supervision by the vast majority of the public. The development of nutraceuticals can be achieved through many bioresources and organisms. This review article will discuss the current research on nutraceuticals from different biological sources and their potential use as an agent for improving human health and well-being, as well as the gaps and future perspective of research related to nutraceutical development.

Keywords: medicinal mushroom; microbiota; nutraceutical development; human well-being; phytochemicals

1. Introduction to Nutraceuticals

The term “nutraceutical” has been used since the late 1980s to describe medicinally or nutritionally functional food [1]. A nutraceutical can also be described as an all-natural product that is known to have biological advantages against one or more illnesses. The term “nutraceuticals” is an amalgamation of the words “nutrient” and “ceutical” —where “ceutical” means therapy —and it is referring to food, supplements, and/or products that